are not entomologists. Mr. Muesebeck must make sure that not only the narrative portions but also the illustrations, tables and citations make clear entomological sense as well as being in good English. Those who read the *Entomological Review* know how well he has and is succeeding.

Finally, though not in chronological sequence, we wish to make particular mention of one high-light. In 1959 the voting membership of the Entomological Society of America added the name of Carl Frederick William Muesebeck to its most select category—Honorary Membership. The writer therefore speaks for many, the membership of the Entomological Society of America, in expressing love and admiration for this man—scientist, gentleman, friend, and devotee of service.

R. H. Nelson
Executive Secretary Emeritus,
Entomological Society of America

MUESEBECKIINI, A NEW TRIBE OF BRACONIDAE
(Hymenoptera)

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ABSTRACT—A new tribe of the subfamily Ichneutinae, **Muesebeckiini**, is erected for the genera *Oligoneurus* Szépligeti, *Paroligoneurus* Muesebeck, *Muesebeckia* Mason and three new genera. Keys are given for the genera and the 8 species of *Muesebeckia*. New taxa described are: *M.* **sinaloa**, n. sp. from Mexico; *M.* **coelebs**, n. sp. from Mexico; *M.* **durango**, n. sp. from Mexico; *M.* **concordia**, n. sp. from Mexico; *M.* **chota**, n. sp. from Ecuador; *M.* **palmito**, n. sp. from Mexico; *M.* **serrata**, n. sp. from Mexico; **Lispixys avispa**, n. gen. and n. sp. from Peru; **L. levis**, n. sp. from Mexico; **Pulchaukia godavari**, n. gen. and n. sp. from Nepal; **Ciliosa peruana**, n. gen. and n. sp. from Peru.

This paper began as a revision of *Muesebeckia* Mason but before its completion I was convinced that there were three new genera involved. These four genera differ from *Oligoneurus* Szépligeti and *Paroligoneurus* Muesebeck (neither treated here) by the presence of notauli and mesopleural groove, but share no other characters not also shared with the latter two genera. Altogether they form a compact but fairly isolated group, apparently related to *Ichneutes* Nees. Therefore I

erect a new tribe, Muesebeckiini, to hold them and assign it to the Ichneutinae.

The relationships of this small group are problematical, but they appear to me to be derived from *Ichneutes* or some ancestral ichneutine. There are many resemblances, but the most noteworthy common features are: basal vein strongly curved at its anterior end, maxillary palpi 5-segmented, labial palpi 4-segmented, occipital carina absent, tibial spurs small and stout, a foveolate mesopleural furrow slanting downward and backward and passing above mid coxa, tarsal claws simple, ovipositor comparatively small, strongly narrowed subbasally to a thin apical portion.

Oligoneurus, *Muesebeckia*, *Ciliosa* n. gen., and *Lispixys* n. gen., are all New World elements, mostly Neotropical. *Pulchaukia* n. gen. is known only from the Himalayas but *Paroligoneurus* is almost world wide, absent only in Europe and perhaps the Australian Region. Since the species are rarely taken except by Malaise traps, the world distribution is probably much wider, and significantly different, from that now known.

Nothing is known of the life history except that some species of *Paroligoneurus* have been reared from Lepidopterous leafminers.

Muesebeckiini, new tribe

Stout, small (2–3 mm.), mostly black species resembling *Apanteles* Foerster; sculpture mostly smooth and finely, but not densely, punctate.

Head transverse; eyes prominent; occipital carina absent; antennae far apart near top of eyes; frons short and nearly horizontal; face flattened and broad; clypeus flattened, its base and apex not differentiated, apical margin thin and rounded; mandible long, tapered and strongly twisted, anterior tooth longer, maxillary palpi 5-jointed, labial palpi usually 4-jointed with the 3rd minute, rarely 3-jointed.

Thorax short and stout; prepectal carina usually absent, but occasionally the upper end developed; tibial spurs small and weak; tarsal claws simple.

Venation reduced; apical abscissae of radius and cubitus represented only by a crease in the wing membrane or by a very weakly pigmented line; recurrent and intercubital veins unsclerotized, weakly pigmented or absent; terminal part of discoideus and all of subdiscoideus not sclerotized but merely pigmented; brachius and interanals absent; basal vein curving strongly distad just behind its junction with the cubitus; radiella absent basally but represented by a crease apically; cubitella very weakly pigmented to a crease only. Postnervellus, brachiella, and interanella absent; submediella and posterior end of nervellus represented only by a curving crease.

Abdomen sessile, short and somewhat depressed; first segment with conspicuous membranous lateral areas; spiracles on first tergite; fourth and following tergites distinct and occupying apical 0.2–0.4; hypopygium large, pointed, and V-shaped in cross-section; ovipositor with no subapical notch, sheaths not protruding beyond apex of abdomen by more than length of first tergite.

The venation of the forewing is completely diagnostic (Mason, 1957).

KEY TO GENERA OF MUESEBECKIINI

1. Notauli absent; mesopleural groove absent 2
   Notauli present; mesopleural groove present, sometimes weak 3
2. Eyes densely hairy ..... **Oligoneurus** Szép.
   Eyes glabrous ..... **Paroligoneurus** Mues.
3. Eyes densely hairy; labial palpi 3-jointed; tergite II glabrous and basally aciculate ..... **Ciliosa**, n. gen.
   Eyes glabrous or very sparsely hairy; labial palpi 4-jointed, the 3rd joint minute 4
4. Oriental; propodeum with no median carina; tergite I smooth polished and ecarinate behind spiracles ..... **Pulchaukia**, n. gen.
   American; propodeum with a strong median carina; tergite I dull and rugulose or, if polished, with strong lateral carinae behind spiracles 5
5. Mesopleural groove shallow and incomplete, tergite I polished and bearing a median groove; tergite II glabrous; ovipositor sheath much longer than tergite I ..... **Lispixys**, n. gen.
   Mesopleural groove deep, at least anteriorly, tergite I coriaceous, granular, or rugose; tergite II with median or dorsolateral hair patches; ovipositor sheath shorter than tergite I ..... **Muesebeckia** Mason

Muesebeckia Mason

Muesebeckia Mason, 1957, Can. Ent. 89:355.

Type of the genus: *Muesebeckia eximia* Mason.

Flagellum of the female (except in *M. sinaloa*, n. sp.) with the central joints, and usually also the apical, higher than wide; the ventral surfaces of these joints flattened and covered with dense pile, resembling tyloids of male Ichneumonidae. These "tyloids" interrupt the regular distribution of longitudinal sensoria that occur throughout the rest of the flagellar joints.

Notauli deep and crenulate, not extending back as far as the level of the tegulae (farther in *M. eximia*). A strong and more or less foveolate mesopleural furrow extending from about halfway up the anterior margin of the pleuron in a generally downward slant to about half way, thence upward above the middle coxa to the posterior margin; the posterior part usually shallow and unsculptured. Propodeum and metapleuron dull and rugose to coriaceous, the former with a strong median carinae and sometimes also lateral longitudinal carinae and more or less well defined costulae.

First tergite broadening rapidly to the prominent spiracles at about the middle, thence parallel sided or slightly widening; length of tergite I 0.8 to 1.5 times its apical width; the surface rugose, coriaceous or granular with a basal groove and usually median apical intumescence; a pair of dorsolateral carinae always present basally and prolonged, more or less continuously, to near the posterior corners. Sides of tergite I always rough and rugulose or rugose; lateral membranous margins broad. Remaining tergites smooth or very weakly reticulate (except in *M. eximia*) and bearing sparse hairs. Ovipositor straight or weakly decurved, about as long as tergite I, strongly narrowed about midway to an extremely thin point; sheaths 0.6 to 0.8 as long as tergite I, polished with a few apical hairs.

Key to Species of **Mucsebeckia**

1. Nearctic; mesopleural furrow equally sharp and foveolate from prepectus to margin of metapleuron (fig. 10) ..... 2. **eximia** Mason
   Neotropical or Mexican; mesopleural furrow contrastingly shallower and unsculptured in the posterior 0.4 2
2. First tergite wider than long (length/width = 0.8–0.9); ♂ flagellum 24-segmented; prepectal carina complete above mesopleural furrow ..... 3. **coelebs**, n. sp.
   First tergite longer than wide (length /width = 1.1–1.4); flagellum less than 22-segmented; prepectal carina rarely complete above mesopleural furrow 3
3. Flagellum of ♀ without ventral tyloids, all joints terete (fig. 9); hair patches on tergites II–III not or only vaguely paired; posterior half of mesopleural furrow absent ..... 1. **sinaloa**, n. sp.
   Flagellum of ♀ with ventral tyloids and joints of apical half deeper than wide; hair patches of tergites II–III usually paired; posterior half of mesopleural furrow present as a shallow unsculptured groove 4
4. Flagellum of ♀ 15-jointed and little tapered (fig. 13); costulae strong; mesopleural furrow without sculpture; Ecuador ..... 6. **chota**, n. sp.
   Flagellum of ♀ longer or more tapered; mesopleural furrow foveolate; Mexico 5
5. Females 6
   Males 9
6. Flagellar joint 8 greatly prolonged distally, over twice as high as long (fig. 15) ..... 8. **serrata**, n. sp.
   Flagellar joints more uniform, joints 8–10 similar and about as long as deep 7
7. Last 2–3 joints of flagellum terete, twice as long as high and not nearly so deep as central joints (fig. 14); clypeus yellow ..... 7. **palmito**, n. sp.
   Last 2–3 joints of flagellum higher than wide or moniliform, about as long as high and almost as deep as central joints; clypeus brown or blackish 8
8. Apical flagellar joints moniliform and about half as deep as central joints (fig. 11); face, clypeus and basal flagellar joints uniformly black or blackish ..... 4. **durango**, n. sp.
   Apical flagellar joints much deeper than wide and almost as deep as central joints (fig. 12); clypeus and center of face contrastingly brown, rest of face blackish; basal flagellar joints yellow ..... 5. **concordia**, n. sp.
9. Head yellow below level of antennal sockets ..... 7. **palmito**, n. sp.
   At least cheeks and sides of face black or dark brown 10
10. Clypeus and face uniformly black or dark brown ..... 4. **durango**, n. sp.
    Clypeus and face above it contrastingly brown to yellow; remainder of face dark brown or black 11
11. Strong costulae setting off apical areas that are much more polished than the dull remainder of propodeum ..... 8. **serrata**, n. sp.
    Costulae indistinct; propodeum rather uniformly rugose and dull ..... 5. **concordia**, n. sp.

1. **Muesebeckia sinaloa**, n. sp.
(Fig. 9)

DIAGNOSIS. The only species of *Muesebeckia* without tyloids; also characterized by having unpaired hair patches on basal tergites and by lacking the posterior, normally shallow, part of the mesopleural furrow.

DESCRIPTION. Holotype: female, length 2.5 mm.

Head. Eyes with a very few minute sparse hairs; height of eye 3.7 times length of malar space; inner margins of eyes subparallel; face weakly intumescent, slightly raised above center of clypeus. In lateral view length of eye 1.9 times length of cheek. Flagellum 21-jointed, without tyloids; not very long and slender, about as long as forewing, all joints terete, the central and apical ones fusiform, 1.6–1.8 times as long as wide, the apical joints about 0.6 as wide as the central ones (fig. 9).

Thorax. Mesopleural furrow extending less than half way across mesopleuron, with weak irregular sculpture and no posterior depression; propodeum with a strong median longitudinal carina, the surface otherwise dull and partly irregularly rugose.

Abdomen. First tergite 1.2 times as long as wide, surface of tergite generally smooth and coriaceous with a low rounded median elevation posteriorly. Remaining tergites smooth and shining, tergite II as long as tergite I; tergite III 0.7 times as long as tergite II; remaining tergites about as long as combined tergites II and III; suture between tergites II and III shallowly indicated centrally. All tergites from II–VI with large transverse patches of sparse hair that are not or only vaguely separated on the median line. Hypopygium 2.0 times as long as tergite I.

Color. Black, with mouth parts, legs and coxae, scape and pedicel yellowish, the following parts brown: clypeus, and elevated central part of face immediately above it, a small area above mandible base, antenna basally, wing veins, base of abdomen below, hind tarsus, apex of hind tibia.

TYPE: Holotype: female, 15 miles west of El Palmito, near Potrerillos at 5,000 ft., Sin., MEXICO, 30 July 1964, W. R. M. Mason. (Canadian National Collection No. 10830.)

2. **Muesebeckia eximia** Mason
(Fig. 10)

Muesebeckia eximius Mason, 1957. Can. Ent. 89: 355–357.

DIAGNOSIS. This species may be easily recognized by its occurrence in Eastern Canada and U.S.A., by the broad first tergite (as broad as long), long malar space, and complete foveolate mesopleural furrow extending to posterior margin.

DESCRIPTION. Female, length 2.5–3.0 mm.

Head. Eyes glabrous; malar space long, height of eye 2.5 times malar space. Inner margins of eyes curved but slightly divergent below; face very weakly intumescent with two well defined but shallow grooves running upward from tentorial pits. In lateral view length of eye 1.5–1.6 times length of cheek. Flagellum 19-, to 20-jointed, long and slender, the shortest joints about 1.5 times as long as wide; ventral tyloids from segment 8 or 9 to apex; antenna slightly tapered toward apex, apical joints about 0.6 times as deep as central joints (fig. 10).

Thorax. Notauli unusually long, sometimes extending weakly almost to scutellum; mesopleural furrow irregularly foveolate, extending the full length of the mesopleuron without an angulation; propodeum strongly rugose or rugulose.

Abdomen. First tergite 0.9 to 1.0 times as long as wide; longitudinally strongly arched, with a broad median groove on the basal half and transversely flattened apically; the surface moderately to very strongly rugose and rugulose, dorsolateral carinae strong basally, often percurrent and irregular apically, widely separated; tergite II about as long as tergite I, tergite III about 0.6 times as long; remainder of abdomen about as long as tergite I. Suture between tergites II and III sharp and conspicuous centrally but absent laterally; tergite II mostly granular and often weakly aciculate at anterior margin; surface of abdomen behind tergite II smooth and shining, often with faint granular sculpture; lateral hair patches on tergites II to III consisting of 10 to 20 sparse hairs which become irregular rows on the more posterior tergites. Hypopygium 1.2 to 1.3 times as long as petiole.

Color. Black, mouthparts, legs and coxae yellowish, the following parts various shades of brown: clypeus, scape, pedicel, basal part of flagellum, tegula, wing veins, apical parts of mid and anterior tarsi, usually hind tibia and hind tarsus, basal parts of abdomen below.

Male. Resembling female except for the following details: antenna 20-, to 21-jointed, without tyloids; central joints not so deep, therefore appearing longer and proportionately thinner; eye 1.7 times as long as cheek; hind tibia and tarsus varying from brown to yellowish.

DISTRIBUTION. QUE., Wakefield, Hull; ONT., Ottawa, Stittsville, Innisville; N.C., Pink Beds at 3,300 feet in Pisgah National Forest. Specimens seen; 25 ♂♂, 25 ♀♀.

3. **Muesebeckia coelebs**, n. sp.

DIAGNOSIS. Strongly characterized by the wide tergite I, wide cheek, and prepectal carina extending from mesopleural furrow to tegula.

DESCRIPTION. Holotype: Male, length 3 mm.

Head. Eyes completely glabrous, inner margins divergent below at about 15°. Height of eye 2.7 times malar space; a pair of shallow grooves running upward from the tentorial pits, the area between them slightly elevated. Cheek long in lateral view, length of eye 1.0–1.1 times length of cheek. Flagellum 24-jointed, long and slender, basal joints about 3 times as long as wide, central and apical joints about twice as long as wide; flagellum tapered, apical joints only half as wide as basal and central joints.

Thorax. Anterior half of mesopleural furrow deep and crossed by a few costulae, prolonged as a prepectal carina above; propodeum rugose, with a strong median carina and weak irregular costulae.

Abdomen. First tergite 0.9 times as long as wide, arched centrally, with a median groove and strong dorsolateral carinae on the basal half; surface of tergite with weak irregular rugosities but mostly granular and weakly shiny; remainder of abdomen polished and without sculpture. Groove between tergites II and III sharply defined centrally; tergites II and III occupying half remaining length of abdomen. Tergite II as long as tergite I; tergite III two-thirds as long as tergite II; following tergites successively shorter. Tergites II, III and IV with dorsolateral clumps of sparse hairs, irregular subapical fringes on posterior tergites.

Color. Black, legs yellow, the following parts brown to dark brown: mandible, tegula, wing base, veins, coxae, and tarsi.

TYPES. Holotype: Male, 8 miles west of El Palmito at 6,500 ft., Sin., MEXICO, 16 July 1964, W. R. M. Mason (Canadian National Collection No. 10831).

Paratype: Male, same data as holotype (CNC).

4. **Muesebeckia durango**, n. sp.
(Figs. 1, 7, 11)

DIAGNOSIS. The uniformly black face and clypeus of both sexes is characteristic.

DESCRIPTION. Holotype: Female, length 2.5 mm.

Head. Eyes with a few short sparse hairs; malar space long, height of eye 2.8 times malar space; inner margins of eyes subparallel; face weakly intumescent at sides, central area raised above the clypeus. In lateral view length of eye 1.7 times length of cheek, flagellum 18-jointed, comparatively short and stout, central and apical joints deeper than wide and about as deep as long, central joints slightly prolonged distad on the ventral side and almost twice as deep as the moniliform apical joints; ventral tyloids present from joint 9 to apex.

Thorax. Mesopleural furrow broad and deep with a little irregular sculpture anteriorly; posterior third of furrow very shallow and smooth; propodeum rugose, with a strong median and a pair of lateral longitudinal carinae; prescutellar furrow foveolate, with a stronger median transverse carina.

Abdomen. First tergite 1.2 times as long as wide, and almost evenly tapered from base to apex, with widely separated percurrent dorsolateral carinae; anteriorly bearing a median rugulose groove; posterior half rugose with some longitudinal aciculation. Tergite II smooth and shining, as long as tergite I; tergite III 0.6 times as long as tergite II; remaining tergites about half as long as combined tergites II and III; suture between tergites II and III indicated only centrally. Tergites II and III with dorsolateral patches of sparse hair; tergites IV and the following with irregular bands of sparse hairs. Hypopygium 1.5 times as long as tergite I.

Color. Black, mouth parts, legs and coxae yellowish, the following parts brown: scape, pedicel, wing veins, apex of front tarsus, all of hind and middle tarsi, apex of hind tibia.

Variation. Female paratypes: resembling the holotype except in the following details: flagellum 17-, to 18-jointed, tyloids from segment 8 or 9; in lateral view length of eye 1.7–1.9 times length of cheek; first tergite 1.2–1.4 times as long as wide; sculpture of tergite I varying from coriaceous to rugulose with apical quarter aciculate; hair patches of tergite II often united.

Male paratypes: resembling the holotype except in the following details: flagellum 20-, to 22-jointed and without tyloids, central and apical joints fusiform and about twice as long as wide, apical joints about ⅔ as wide as central joints, eyes glabrous, tergites II and III equal in length and each about 0.7 times as long as tergite I, apical third to two-thirds of hind tibia brown.

TYPES. Holotype: Female, 24 miles west of La Ciudad at 7,000 feet, Dgo., MEXICO, 2 July 1964, W. R. M. Mason (Canadian National Collection No. 10832).

Paratypes: 2♂♂, 4♀♀, same data as holotype but collected between 28 June and 4 August 1964; 1♀, 15 miles west of El Palmito, near Potrerillos at 5,000 feet, Sin., MEXICO, 8 July 1964, W. R. M. Mason (CNC).

5. **Muesebeckia concordia**, n. sp.
(Fig. 12)

DIAGNOSIS. The female is recognized by the strongly deepened terminal antennal joints.

DESCRIPTION. Holotype: Female, length 2 mm.

Head. Eyes with a few sparse hairs. Height of eye 3.4 times malar space. Inner margins of eyes subparallel; face very weakly intumescent, area directly above clypeus weakly elevated. Length of eye in lateral view 1.7 times length of cheek. Flagellum 19-jointed, comparatively short and stout; tyloids from joint 10 to apex; basal joints long and cylindrical, central and apical joints squarish to submoniliform, about 1.3 to 1.5 times as high as wide, apical joints 0.7 to 0.8 times as long, and almost as high, as largest central joints.

Thorax. Mesopleural furrow extending half length mesopleuron, mostly smooth but weakly sculptured anteriorly; propodeum rugose, with a strong median carina.

Abdomen. First tergite 1.2 times as long as wide, dorsolateral carina strong and percurrent; basal median groove rugulose, apical 0.3 longitudinally aciculorugose, remainder of surface granular and weakly shiny. Tergite II 0.8 times as long as tergite I; tergite III 0.4 times as long as tergite II; remainder of abdomen about two-thirds as long as combined tergites II and III. Groove between tergites II and III shallow and poorly defined; surface of abdomen (except tergite I) smooth and shiny. Tergites II and III with dorsolateral patches of 3 to 10 sparse hairs; tergite IV and those following with a transverse row of sparse hairs. Hypopygium 1.6 times as long as tergite I.

Color. Black, the following parts yellowish: mouth parts, scape, pedicel, basal two or three joints of flagellum, all legs and coxae. The following parts brown: clypeus, lower central part of face, remainder of flagellum, tegula, wing veins, apex of hind tibia, apex of middle tarsus and all hind tarsus, base of abdomen ventrally.

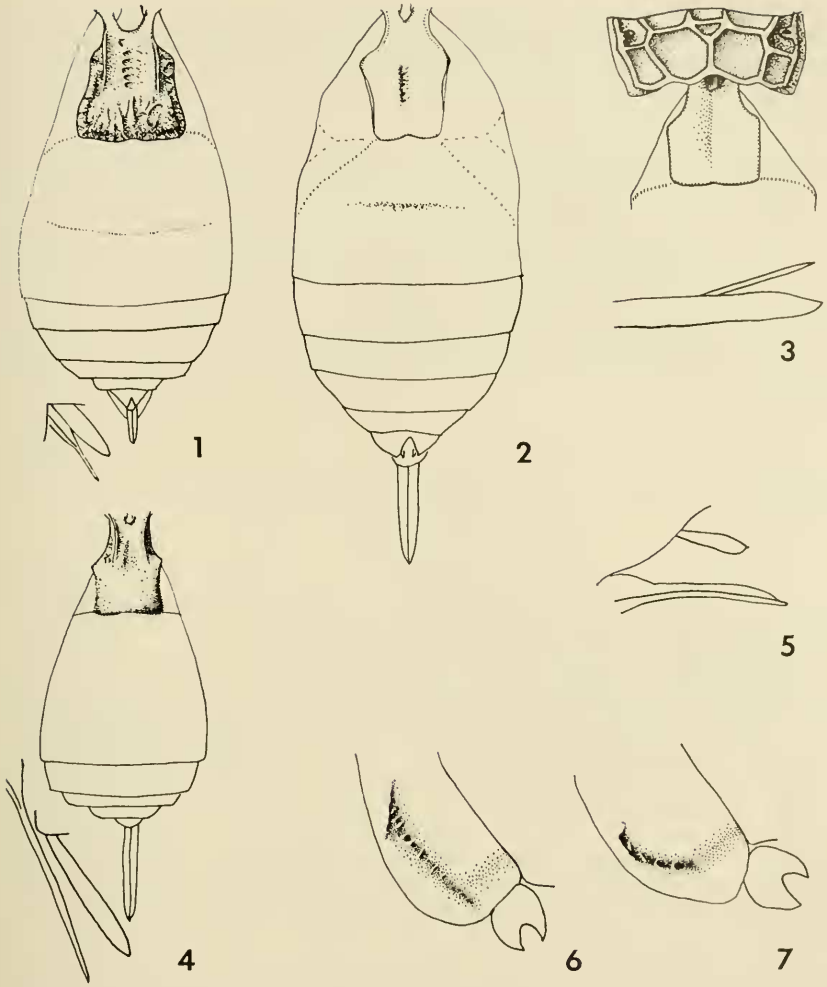
Male Paratype. Resembles the female except for the following details: flagellum longer with all joints terete and with no tyloids, central and apical joints somewhat fusiform and about twice as long as wide; length of eye 1.9 times length of cheek; tergite I about 1.1 times as long as wide, the apical aciculations much less prominent, a median apical carina present; only first joint of flagellum yellow, hind coxa brown basally.

TYPES. Holotype: Female, 20 miles east of Concordia at 3,000 ft., Sin., MEXICO, 4 August 1964, W. R. M. Mason (Canadian National Collection No. 10833).

Paratype: Male, same data as holotype (CNC).

6. **Muesebeckia chota**, n. sp.
(Fig. 13)

DIAGNOSIS. Characterized by the smooth mesopleural groove, short antenna of the female and strong costulae.



Figs. 1–7. 1, *Muesebeckia durango*, n. sp., abdomen, dorsal view and ovipositor lateral view; 2, *Lispixys levis*, n. gen., n. sp., abdomen, dorsal view; 3, *L. avispa*, n. sp., propodeum and first tergum dorsal view and ovipositor, lateral view; 4, *Pulchaukia godavari*, n. gen., n. sp., abdomen, dorsal view and ovipositor, lateral view; 5, *Ciliosa peruana*, n. gen., n. sp., ovipositor, lateral view; 6, *P. godavari*, n. sp., mesopleuron; 7, *M. durango*, n. sp. mesopleuron.

DESCRIPTION. Holotype: female, length 2.0 mm.

Head. Eyes with a few short sparse hairs; height of eye 3.1 times malar space; inner margins of eyes convex throughout their length; face scarcely intumescent, a pair of broad shallow grooves extending from tentorial pits about half way up face. In lateral view length of eye 1.9 times length of cheek. Flagellum 15-jointed, comparatively short and little tapered, central joints 1.4 times as high as wide;

apical joints 0.8–0.9 times as high as central joints; central joints prolonged distad at the lower distal corners; ventral tyloids present from joint 9 to apex.

Thorax. Mesopleural furrow without any sculpture; posterior 0.4 very shallow and broad; propodeum rugose, with a strong median carina, costulae and a pair of lateral longitudinal carinae.

Abdomen. First tergite 1.2 times as long as wide; spiracles prominent; a pair of conspicuous percurrent dorsolateral carinae passing above spiracles; surface of tergite weakly and irregularly rugulose. Tergite II smooth and shiny, 0.9 times as long as tergite I; tergite III 0.7 times as long as tergite II; remaining tergites about as long as tergite II; suture between tergites II and III very shallow and smooth and indicated only centrally. Tergites II and III with small dorsolateral patches of sparse hair; tergites IV and following with irregular rows of sparse hairs. Hypopygium 1.3 times as long as tergite I.

Color. Piceous-black with yellow legs and the following parts brown: mouthparts, scape, pedicel, wing veins, hind coxa, middle and hind tarsi, hind tibia apically above.

TYPE. Holotype: female, Rio Chota, at 1,800 meters, ECUADOR, 10 June 1965, Luis E. Peña (American Entomological Institute, Ann Arbor).

7. **Muesebeckia palmito**, n. sp.
(Fig. 14)

DIAGNOSIS. The mostly yellow head of the male and the yellow clypeus and central part of the face in the female are characteristic.

DESCRIPTION. Holotype: female, length 2.5 mm.

Head. Eyes with a few sparse and very short hairs; malar space long, height of eye 2.8 times malar space; inner margins of eyes very weakly divergent below; face weakly but uniformly intumescent. In lateral view length of eye 1.5 times length of cheek. Flagellum 20-jointed; basal joints cylindrical but central joints much stouter and squarish in lateral view with the ventrodistal corners prolonged distally; central joints 1.4 times as deep as basal joints; central joints almost as wide as deep and bearing large, round, flat tyloids ventrally; apical joints partly collapsed but obviously not as deep as central joints although of about the same length; the last two joints apparently without tyloids and fusiform, about twice as long as wide; large ventral tyloids beginning at joint 9 and extending to joint 18 or 19.

Thorax. Mesopleural furrow deep, polished and bearing weak transverse costae in the anterior 0.6; posterior 0.4 of furrow very shallow and polished; prescutellar furrow deep and weakly foveolate; propodeum rugose to rugulose, median carina poorly defined.

Abdomen. First tergite 1.2 times as long as wide; dorsolateral carinae poorly defined; a median rugulose groove on the anterior 0.6; posterior part coriaceous, the apical margin bearing several longitudinal aciculations. Tergite II shiny but bearing faint reticulate sculpture, 0.8 times as long as tergite I; tergite III 0.6 times as long as tergite II; remainder of tergites slightly shorter than combined tergite II plus III; suture between tergites II and III shallow but visible across its entire width and very weakly foveolate. Tergites II and III with dorsolateral patches of sparse hair; tergites IV and the following with irregular transverse bands of sparse hair. Hypopygium 1.8 times as long as tergite I.

Color. Black, with yellow legs and the following parts brown: upper part and sides of face, cheek below eye, flagellum, posterior corner of pronotum, tegula, wing veins, middle and hind tarsi and apex of hind tibia above. The following parts, in addition to the legs, yellow: mouth parts, clypeus, lower central part of face, scape, pedicel.

Male paratype; resembles the holotype except in the following details: flagellum 21-jointed and without tyloids, central and apical joints all fusiform and about twice as long as wide, apical joints about two-thirds as wide as central joints; face, temple, and postocciput completely yellow below level of antenna sockets; propleuron yellow, pronotum yellow behind, brown anteriorly; tegula and wing base yellow, prepectus and mesopleural furrow brown, middle tarsus yellowish.

TYPES. Holotype: female, 4½ miles west of El Palmito at 6,500 ft., Sin., MEXICO, 25 July 1964, W. R. M. Mason (Canadian National Collection No. 10834).

Paratype: male, same data as holotype but collected, 4 August 1964 (CNC).

8. **Muesebeckia serrata**, n. sp.
(Fig. 15)

DIAGNOSIS. The strongly serrate female antenna distinguishes this species. Males have strong costulae and often a striate first tergite.

DESCRIPTION. Holotype: female, length 2.5 mm.

Head. Eyes with a few sparse and short hairs, height of eye 4.5 times malar space; inner margins of eyes slightly convergent below; face intumescent, lower central area raised above central part of clypeus. In lateral view length of eye 1.7 times length of cheek. Flagellum 15-jointed, short and stout; central and apical joints deeper than wide and the central strongly prolonged distally at the ventrodistal corners, joint 8 exceptionally strongly pointed, joints 10 to 12 about 1.5 times as high as wide, joints 14 and 15 submoniliform, ventral tyloids present from joint 8 to apex.

Thorax. Anterior 0.6 mesopleural furrow deep and vaguely sculptured; posterior 0.4 very shallow, broad and polished; prescutellar furrow deep and foveolate with a stronger median transverse costa; propodeum rugose with a strong median longitudinal carina.

Abdomen. First tergite 1.1 times as long as wide, anterior part bearing a broad median rugulose furrow; posterior half coriaceous and bearing several longitudinal carinae on the posterior 0.2 to 0.3. Tergite II smooth and shiny, 0.9 times as long as tergite I; tergite III 0.7 times as long as tergite II; remaining tergites about as long as tergite II; suture between tergites II and III very shallow but extending full width of abdomen. Tergites II and III with dorsolateral patches of sparse hair; tergites IV and following with irregular bands of sparse hair. Hypopygium 1.5 times as long as tergite I.

Color. Black, with yellow legs and the following parts brown: mouth parts, clypeus, elevated lower part of face above it, suffusions below antennal sockets, entire antenna except for the yellowish underside of scape, pedicel, and basal two or three joints of flagellum, wing veins, middle and hind tarsi, hind tibia apically above.

Variation. Female paratypes: resembling the holotype except in the following

details: flagellum 15-, to 16-jointed, length of eye 1.6–1.7 times length of cheek, apical 0.2–0.5 of first tergite with weak to very strong longitudinal carinae.

Male paratypes: resembling the holotype except in the following details: flagellum 18-jointed, all joints fusiform, central ones about 2.5 times as long as wide, apical ones about twice as long as wide; length of eye 1.7 times length of cheek; entire face and lower cheeks dark brown, but clypeus and raised area above it lighter brown as in the female; apical 0.4–0.6 of first tergite bearing strong longitudinal carinae, the dorsal carinae visible basally.

TYPES: Holotype: female, 15 miles west of El Palmito near Potrerillos at 5,000 ft., Sin., MEXICO, 25 July 1964, W. R. M. Mason (Canadian National Collection No. 10835).

Paratypes, 2♂♂, 2♀♀, same data as holotype but collected 30 July 1964; 1♀, 4½ miles west of El Palmito at 6,500 ft., 20 July 1964, W. R. M. Mason; 1♂, 30 miles west La Ciudad, Dgo., at 6,500 ft., 25 July 1964, W. R. M. Mason (CNC).

Lispixys, n. gen.

Type of the genus: *Lispixys avispa*, n. sp.

This genus differs from *Muesebeckia* by the glabrous second tergite, the very shallow and incomplete mesopleural furrow, the more or less completely carinated propodeum and by the long straight ovipositor with large deep compressed sheaths, which are deeper than the basal flagellar joint and much longer than the first tergite. In addition the first tergite is smooth and glabrous with a pair of percurrent dorsolateral carinae and a median groove. The first tergite is widest at the spiracles, the female antennae are without tyloids, and the head is unusually wide (width of head/height of face from antennal sockets to apex of clypeus = 1.9–2.1).

Key to Species of **Lispixys**

Fulvous; areas of propodeum smooth, carination regular ..... **avispa**, n. sp.
Black; areas of propodeum rugulose, carination irregular ..... **levis**, n. sp.

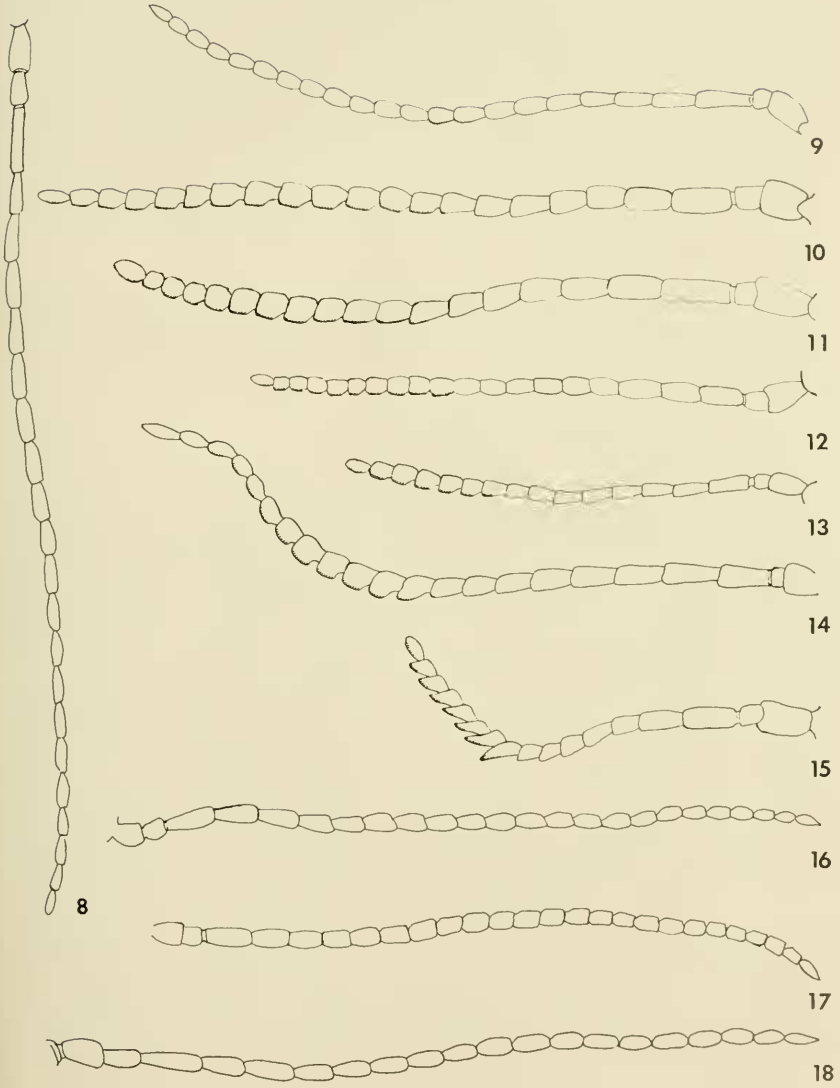
Lispixys avispa, n. sp.
(Figs. 3, 17)

DESCRIPTION. Holotype: female, length 3.0 mm.

Head. Eyes glabrous; height of eye 4.0 times malar space; inner margins of eyes subparallel; face weakly intumescent, a pair of shallow depressions extending upward from central part of clypeus.

In lateral view length of eye 2.7 times length of cheek. Flagellum 24-jointed, long and slender, all joints terete; length of joints from about seventh to apex remaining rather constant while their width decreases; apical joints about 0.7 times as wide as central ones; central joints about 1.5 times as long as wide, apical ones twice; tyloids absent.

Thorax. Mesopleural furrow very shallow, smooth and incomplete centrally, only anterior 0.2 and posterior 0.3 present; propodeum shining and completely carinate, carinae strong and sharply defined; notauli incomplete anteriorly (complete in all other species).



Figs. 8–18, Antennae of females. 8, *Pulchaukia godavari*, n. gen., n. sp.; 9, *Muesebeckia sinaloa*, n. sp.; 10, *M. eximia* Mason; 11, *M. durango*, n. sp.; 12, *M. concordia*, n. sp.; 13, *M. chota*, n. sp.; 14, *M. palmito*, n. sp.; 15, *M. serrata*, n. sp.; 16, *Lispixys levis*, n. gen., n. sp.; 17, *L. avispa*, n. sp.; 18, *Ciliosa peruana*, n. gen., n. sp.

Abdomen. First tergite 1.2 times as long as wide; surface smooth and shining; a pair of strong, percurrent dorsolateral carinae passing above spiracles; a broad, smooth median groove on basal 0.8 of tergite. Remaining tergites smooth and shining; tergite II 1.1 times as long as tergite I; tergite III the same length; remaining tergites about as long as tergite II; suture between tergites II and III very poorly defined. Tergite II glabrous; tergite III and those following with a subapical row of sparse hairs. Hypopygium 2.5 times as long as first tergite. Ovipositor straight, sheaths deep and compressed, twice as long as first tergite and almost twice as deep as basal flagellar joint.

Color. Fulvous, the following parts dark brown: tip of mandible, stemmaticum, eyes, ovipositor sheath, tarsal claws, wing veins. Wing membrane moderately fulvous; hind tarsus brown.

TYPE. Holotype: female, Avispas, 400 m., Madre de Dios, PERU, 12–20 Sept. 1962, Luis E. Peña (Canadian National Collection No. 10837).

Lispixys levis, n. sp.
(Figs. 2, 16)

DESCRIPTION. Holotype: female, length 2.3 mm.

Head. Eyes with a very few sparse hairs; height of eye 3.5 times malar space; inner margins of eyes convergent below at about 10°; face almost flat, weakly intumescent at the sides, median longitudinal area weakly raised. In lateral view length of eye 2.5 times length of cheek. Flagellum 22-jointed, slender and long; central and apical joints all fusiform, and 1.6 to 1.8 times as long as wide; the apical joints about 0.7 times as wide as central ones; tyloids absent.

Thorax. Mesopleural furrow absent anteriorly but represented by a very shallow polished groove above the middle coxa; propodeum with a median longitudinal (divided into two anteriorly), a pair of lateral longitudinal, and costulae, represented by irregular strong carinae, areas rugulose to rugose.

Abdomen. First tergite 1.5 times as long as wide; surface completely smooth and shining except for a weakly foveolate central median groove. Tergites II and III smooth and shining, subtriangular in outline; tergite II 0.6 times as long as tergite I, tergite III as long as tergite II; remaining tergites 1.3 times as long as combined tergites II and III; suture between tergites II and III broadly, but very weakly, indicated centrally. Tergite II glabrous, tergite III with a multiple subapical row of sparse hair; row broken in middle; successive tergites with similar bands of sparse hairs. Hypopygium 2.0 times as long as tergite I. Ovipositor straight; sheath about 1.4 times as long as tergite I and deeper than basal flagellar joint.

Color. Black with yellow legs, the following parts brown: mouthparts, scape, pedicel, flagellar joint 1, tegula, wing veins, apical margins of third and following tergites, hind tarsus, apical joint of middle tarsus.

TYPE. Holotype: female, 20 miles east of Concordia at 3,000 ft., Sin., MEXICO, 4 August 1964, W. R. M. Mason (Canadian National Collection No. 10836).

Pulchaukia, n. gen.

Type of the genus: *Pulchaukia godavari*, n. sp.

This genus is the only Old World member of the tribe with notauli. It differs from *Muesebeckia* by the almost ecarinate propodeum (only a pair of stubs diverge from the median apex), by the part of the first tergite behind the spiracles being glabrous, polished and without any sculpture or carinae, by the angulate and forked mesopleural furrow, and by the long straight ovipositor with sheaths longer than the first tergite. In addition the female antenna is very long, slender, and without tyloids and the second tergite extends the entire width of the abdomen, eliminating all trace of membranous margins.

Pulchaukia godavari, n. sp.
(Figs. 4, 6, 8)

DESCRIPTION. Holotype: female, length 2.0 mm.

Head. Eyes with a few short sparse hairs; height of eye 3.2 times malar space; inner margins of eyes weakly divergent below; face weakly intumescent with a pair of shallow grooves running up from tentorial pits. In lateral view length of eye 2.2 times length of cheek. Flagellum 21-jointed, long and thin, without tyloids, apical and central joints fusiform and about twice as long as wide.

Thorax. Mesopleural furrow comparatively narrow, deep and with weak foveolae for its anterior two-thirds; posterior third meeting anterior part a little in front of its apex at a sharp but obtuse angle (ca. 120°) and only about half as deep; propodeum rugulose apically, coriaceous and partly polished basally, without a median carina, but with a pair of carinae diverging forward from the median apex.

Abdomen. First tergite 1.5 times as long as wide; completely highly polished and strongly intumescent apically, and with no carinae behind spiracles; partly shining, coriaceous, irregular, and with a weak pair of dorsal carinae basally; membraneous lateral margins confined to tergite I; remaining tergites highly polished, tergite II as long as tergite I; tergite III 0.7 times as long as tergite II; remaining tergites about as long as tergite III; suture between tergites II and III invisible. Tergite II with a median patch of sparse hair; tergites III and following with irregular transverse bands of sparse hairs. Hypopygium about twice as long as tergite I. Ovipositor long and straight, sheaths about 1.3 times as long as tergite I and about as deep as basal flagellar segment.

Color. Black, with yellow legs and mandibles, the following parts brown: mouthparts, scape, pedicel, tegula, wing veins, all coxae, all tarsi, hind tibia.

TYPE. Holotype: female, Godavari, Kathmandu at 6,000 ft., NEPAL, 20–22 July 1967, Canadian Nepal Expedition (Canadian National Collection No. 10839).

Ciliosa, n. gen.

Type of the genus: *Ciliosa peruana*, n. sp.

This genus differs from *Muesebeckia* chiefly in its densely hairy eyes: the hairs are closer together than their own lengths; the length of each hair is two or three times the diameter of an ommatidium. *Ciliosa* differs also in having three-jointed labial palpi, a very short malar space (< 0.2 times height of eye), a

glabrous second tergite with strong basal aciculations, and a long thick ovipositor that is as deep and wide as the first flagellar joint. The flagellum of the female is not deepened centrally and is without specialized ventral sensory areas (tyloids).

Ciliosa peruana, n. sp.
(Figs. 5, 18)

DESCRIPTION. Holotype: male, length 2.5 mm.

Head. Eyes hairy, the hairs about half as numerous as the ommatidia and 2–3 times as long as an ommatidium. Malar space very short, height of eye seven times malar space. Inner margins of eyes convergent below at about 10°; face weakly intumescent, area directly above clypeus slightly elevated. In lateral view length of eyes 1.9 times length of cheek measured along the longitudinal axis of the body. Flagellum 18-jointed, long and slender, shortest joints over twice as long as wide; flagellar joints without tyloids; antenna only slightly tapered toward apex, apical joints being about 0.6–0.7 times as wide as central ones.

Thorax. Mesopleural furrow broad and shallow with weak irregular sculpture posteriorly; strongly angulate just behind the middle; propodeum granular to rugose, with a strong median carina and irregular costulae and lateral longitudinal carinae.

Abdomen. First tergite 1.4 times as long as wide; strong percurrent dorsolateral carinae passing above spiracles; surface of tergite weakly irregular, somewhat shining and generally granular. Tergite II three-quarters as long as tergite I and 2.3 times as wide as long; tergite III the same length but a little wider. Both tergites II and III gradually widening from base to apex; tergites II and III divided by a shallow but well-marked groove. Surface of tergite II mostly granular with laterobasal longitudinal aciculation; surface of tergite III smooth and shining except for a central granular area; remaining tergites smooth and shining; tergites III–VII each with an apical fringe of hairs.

Color. Piceous-black, clypeus, scape, and pedicel brown; mouthparts yellow; tegula brown; wing base yellow, veins brown, wing membrane hyaline. All legs and coxae yellow except for the brown hind tarsus and apical tarsomere of anterior and middle legs. Membranous margins of tergites I and II yellowish.

Female. Similar to holotype but granular sculpture of basal abdominal tergites greater in area and intensity; hypopygium about 1.3 times as long as tergite I; ovipositor long, thick and decurved; sheaths about 0.8 times as long as tergite I and as deep as basal flagellar joint.

TYPES. Holotype: male, Quincemil, 750 meters, near Marcapata, Cuzco, PERU, 15–30 October 1962, Luis E. Peña (Canadian National Collection No. 10838).

Paratype: ♀ Peru, same data as holotype (American Entomological Institute).

Reference

Mason, W. R. M. 1957. A new genus and species of Microgasterinae (Hymenoptera: Braconidae). Can. Ent. 89:355–357.